

Breaking Psychological Contracts with the Burden of Workload:  
A Weekly Study of Job Resources as Moderators

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**Abstract**

This intra-individual study examined relationships over time of job demands and resources with employee perceptions of psychological contract breach and violation, or the emotional impact of breach. Based on Conservation of Resources Theory, we expected job demands to increase the susceptibility of experiencing contract breach and violation over time, and we expected this relationship to be moderated by available job resources. In particular, autonomy and social support were expected to buffer relationships of job demands with breach, while development was expected to intensify relationships between job demands and breach. For violation, we expected job resources to intensify the relationships between job demands and breach, in line with the betrayal hypothesis. Analyses on weekly diary data showed that weekly job demands were related to higher contract breach perceptions in the following week when autonomy and social support were low and when development was high. Moreover, weekly job demands were related to higher violation in the next week, especially when social support was high. The study shows that job demands may be related to higher odds of experiencing a breach and higher violation, and job resources may play opposite roles in moderating the relationships of job demands with breach and violation.

**Keywords:** Psychological contract breach, contract violation, weekly diary study, job demands

**Running Head:** Job Demands and Contract Breach

Psychological contract research has flourished during the last decades, and many studies show that psychological contract breach and violation, --being the emotional impact of breach--, have a profound impact on a variety of work outcomes, such as lower commitment and job performance, and higher turnover (Bal, De Lange, Jansen, & Van der Velde, 2008; Solinger, Hofmans, Bal, & Jansen, 2015; Zhao, Wayne, Glibkowski, & Bravo, 2007). One of the central tenets of psychological contract research has been the notion that experiences of contract breach and violation arise from subjective perceptions about events taking place at work, and that this process is prone to interpretation and sensemaking (Morrison & Robinson, 1997; Solinger et al., 2015). Therefore, research increasingly focuses on the context in which breach and violation arise and how this context influences breach perceptions (e.g., Bal, De Lange, Jansen, & Van der Velde, 2013; Dulac, Coyle-Shapiro, Henderson, & Wayne, 2008; Restubog, Bordia, Tang, & Krebs, 2010).

The large majority of these studies have focused on moderators of the relationship between breach and work outcomes (Dulac et al., 2008). Despite the evidence of context playing a role in the aftermath of breach, such as employer interventions (Dawson, Karahanna, & Buchholtz, 2014) or leader-member exchange (Restubog et al., 2010), there is almost no research on the predictors of breach and violation. This is important given that contract breach has a profound impact on work behaviors, and therefore understanding how breach emerges and can be prevented is crucial (Zhao et al., 2007). Moreover, understanding how breach and violation come about in the workplace will advance our knowledge of the dynamic processes that underlie the emergence and consequences of breach and violation.

Contract breach and violation are subjective perceptions, which result from everyday experiences of workers in their organizations (Conway & Briner, 2005; Rousseau, 1995). However, research has primarily relied upon generalized assessments of employees concerning their psychological contract (Guest, 2004), and therefore they have ignored the

daily work dynamics that influence employees' evaluations of their contracts. This is surprising because especially the experiences of employees in their work, such as how much work they have to conduct, are likely to make employees more or less vulnerable to experiencing psychological contract breach (Conway & Briner, 2002). These experiences take place at a weekly, or even daily, level, and therefore measurement of these dynamics should be aligned with the conceptualization of psychological contracts. In response to this, our study takes an intra-individual, high-frequency approach to measuring psychological contracts by studying breach at the weekly level across six weeks.

To this end, we integrate psychological contract theory with Conservation of Resources Theory (Hobfoll, 1989). We expect that especially high job demands are likely to increase susceptibility to perceive contract breach, because they make people more vulnerable to resource losses. Moreover, as it has been shown that job resources may play a role in the impact of work pressure (Bakker, Demerouti, & Sanz-Vergel, 2014; Van der Doef & Maes, 1999), we expect that job resources will have differential effects on the relationships between job demands and breach and violation, meaning that they can either act as a buffer or as an intensifier in the relationships between job demands and breach and violation (Bal, Chiaburu, & Jansen, 2010; Restubog et al., 2010). In sum, the present paper aims to contribute to existing research by integrating COR-theory (Hobfoll, 1989) with the psychological contract literature by showing how weekly work factors relate to contract breach and violation, thereby elucidating psychological contract dynamics in the workplace at the weekly level. Figure 1 shows the research model that will guide this paper.

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### **Theoretical Background**

The psychological contract is defined as employee beliefs concerning the mutual obligations between the employee and the organization (Rousseau, 1995). Central to the concept is that the employee forms perceptions of both explicit and implicit obligations that both parties to the exchange have (Conway & Briner, 2005). Key to understanding psychological contracts is its *subjectivity*, and that contract perceptions arise from and lead to interpretation processes, or sensemaking (Chaudhry, Wayne, & Schalk, 2009). Hence, employees form general perceptions of the promises, expectations and obligations of their employer to them (Conway & Briner, 2005; Roehling, 2008). Stressing the subjective nature of the contract, Morrison and Robinson (1997) pointed towards the crucial role of interpretation processes as foundation for how psychological contracts develop and are perceived to be broken.

Contract breach is defined as the cognition that the employer has failed to fulfill one or more obligations within the psychological contract (Morrison & Robinson, 1997). Breach is accordingly regarded as the cognitive aspect of contract evaluation, and arises from an *event* where an employee perceives a discrepancy between what has been promised (or is obligated) and what has been delivered (Rousseau, 1995). At work, employees are continuously confronted with events and employer actions of which they have to make sense. Not every negative event will be interpreted as a breach, as subjectivity plays a key role in the establishment of a breach (Morrison & Robinson, 1997). Moreover, not every breach will elicit the same emotional reaction among employees because each employee interprets breach in an idiosyncratic way, and as such, the strength of emotional reactions (i.e., violation) can vary (Dulac et al., 2008; Morrison & Robinson, 1997). Feelings of violation are defined as the emotional reactions to breach, and thus capture the affective component of the contract evaluation process (Morrison & Robinson, 1997). In line with dominant theorizing in the psychological contract literature (e.g., Morrison & Robinson, 1997; Rousseau, 1995; Zhao et

al., 2007), we argue that perceptions of breach precede violation. More specifically, violation (e.g., anger or frustration) can *only* occur once a breach has been perceived. This implies that there is a temporal order in the development of breach and violation, and the approach that we follow in the current study is aligned with this (i.e., violation is only measured when a breach has occurred).

Time is an important aspect of psychological contracts. As employees are likely to use situational cues to interpret the state of their psychological contract (Guest, 2004; Morrison & Robinson, 1997), it is likely that employees' experiences at work will be influential in determining whether they interpret events as a breach of their psychological contract or as an unrelated issue being part of everyday working life (Parzefall & Coyle-Shapiro, 2011). Employees continuously experience events happening at work and communications from their managers (such as remarks, feedback, or behavior of the manager), and these events and communications may be negative or positive, depending on employees' appraisals (Conway & Briner, 2005). The likelihood that an event happening at work will be evaluated as a psychological contract breach, will be dependent upon factors shaping the sensemaking process after the event has occurred. To test these dynamics, an alternative theoretical and methodological approach is necessary, and we can no longer rely upon inter-individual research on psychological contracts.

While *inter-individual* research on psychological contracts focuses on differences between people in their generalized evaluations of the psychological contract, the current study with its *intra-individual* approach looks at whether workers are more likely to perceive contract breach in a particular week resulting from their experiences in the preceding week. To investigate the sensemaking processes and factors that enable and hinder this, we need to capture the more dynamic nature of how psychological contracts are experienced in the

reality of the workplace. Hence, we focus on breaches as ‘real’ events that people experience, and which they interpret and make sense of (Morrison & Robinson, 1997).

Conceptually, we believe psychological contracts to operate at a weekly level (Conway & Briner, 2002; Solinger et al., 2015). Recent research by Solinger et al. (2015) found that when employees experience a breach, they indicated that, on average, this breach was still relevant (and influencing their commitment) for two weeks following the breach (with a median relevance duration of one week). As interpretation processes may take time, and because sensemaking of events happening in a certain week may trigger recollection of recent experiences at work, we assume that employees use information from their recent experiences in the preceding week to interpret events as constituting a breach or not. As employees use social information from their environment (Salancik & Pfeffer, 1978) to make sense of breach (Rousseau, 1995), they are likely to not only draw on what they are currently experiencing, but to also use their more elaborate recent experiences at work, such as what has happened in the preceding week at work (see e.g., Solinger et al., 2015). Hence, we expect that employee experiences during a particular week will be influential in predicting their susceptibility to experiencing breach in the subsequent week. As it is likely that people rarely experience breach, as throughout many weeks, people may just conduct their work without experiencing many upsetting events, in this study we aim to predict a rare event (i.e., breach) on the basis of job experiences of people in their working weeks. Conceptually, this may lead to different hypotheses as would be the case with inter-individual research on breach, as the level of analysis pertains to a particular week in which an employee assesses the state of the psychological contract.

### **A COR-Theory Perspective on Contract Breach and Violation**

The susceptibility of employees experiencing breach and violation in a particular week will depend on the work context and the experiences employees have at work because

that context and these experiences shape their interpretations of work-related events.

Morrison and Robinson (1997) argued that central to the development of breach and violation are the sensemaking processes of employees concerning work-related events. We use Conservation Of Resources Theory (COR-Theory; Hobfoll, 1989, 2002) to explain the relations of weekly, work-related factors with breach and violation, and to do so we distinguish between job demands and job resources (Bakker, Ten Brummelhuis, Prins, & Van der Heijden, 2011). Job demands are described as those aspects of a job that require sustained physical and mental effort, while job resources are those aspects in the job that help achieving work goals and stimulate personal growth (Bakker et al., 2011). COR-theory explains that people experience stress when they are confronted with threats to or actual losses of resources. Moreover, they are looking for ways to reduce the impact of stress through investment of resources (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, 2002).

Especially high job demands deplete employees from energy reservoirs which will make them more likely to experience resource losses over time (Demerouti, Bakker, & Bulters, 2004). Even though job demands in itself are not negative, increasing levels of job demands require the investment of resources (Halbesleben et al., 2014), and therefore deplete employees of energy levels (Paškvan, Kubicek, Prem, & Korunka, 2015; Schaufeli & Bakker, 2004). We accordingly expect that especially in weeks where job demands are higher than in other weeks, workers have to spend more resources to cope with these demands, leaving them with fewer resources in the next week to cope with negative events at work. This may lead them to be more susceptible to interpret negative events at work as a contract breach. Moreover, high job demands are generally perceived to be negative (Bakker et al., 2014), which may create a negative spillover effect towards employees' interpretations of workplace events (Demerouti et al., 2004). This indicates that high job demands may cause people to



experience more negative moods, through which they are more likely to make negative attributions about employer actions, and more readily interpret it as a breach (Morrison & Robinson, 1997).

Thus, in line with COR-theory, high job demands cause a resource loss over time, through which individuals have fewer resources to cope with negative events (Hobfoll, 2002). Consequently, in weeks where employees experience high job demands, they become exhausted, and this is likely to spill over to the next week, making them more prone to experiencing breach and violation. As our study focuses on intra-individual changes, we investigate increases and decreases in level of weekly job demands compared to the average level of perceived demands throughout the study. This implication of this is that, even within high-demand jobs, people can still experience weeks in which demands are substantially higher than the average level of demands, and research has shown that such increases in job demands actively diminish employees' energy reservoirs and take away valuable resources (Hofmans, Debusscher, Doci, Spanoulli, & De Fruyt, 2015). Thus, when job demands increase, they become negative, and may lead to work intensification, a process linked to exhaustion and burnout (Granter, McCann, & Boyle, 2015; Paškvan et al., 2015). In line with this reasoning, research of Hofmans et al. (2015) and Paškvan and colleagues (2015) indeed showed that when job demands become too high, workers are likely to perceive this as too challenging and essentially hindering their performance. We therefore expect that high job demands will be related to higher susceptibility of breach and violation over time.

Hypotheses 1 and 2 are:

*H1: Job demands are positively related to contract breach in the next week.*

*H2: Job demands are positively related to feelings of violation in the next week.*

### **The Moderating Role of Job Resources**

Another idea of COR-theory (Hobfoll, 2002) is that in the context of resource loss people try to accumulate and invest resources to avoid negative spirals of resource losses. In

other words, when people have other resources available, this may affect the relationships of job demands with breach and violation. While it may seem plausible that job resources directly affect the likelihood of experiencing a breach, we do, however, reason in line with COR-theory that resources are especially relevant in the context of resources losses, such as weeks with high job demands (see also Hobfoll, 2002, p.312). Moreover, a lack of resources does not have to be directly related to higher susceptibility of breach, as resources may not constitute part of the psychological contract (Morrison & Robinson, 1997), and employees may be able to perform their jobs relatively well without many job resources, but it is primarily in the context of high demands that resources become important (Bakker et al., 2007)

We focus on three job resources which could alter the effects of job demands: autonomy, development and social support (Bakker et al., 2011). These resources are derived from Self-Determination Theory (Ryan & Deci, 2000), which postulates that people at work have three fundamental human needs: autonomy, competence and relatedness. Availability of resources creates an interpretational framework that allows people to perceive their environment differently. However, we expect the three job resources to have differential effects in how they interact with job demands in relation to breach and violation. First, we explain how job resources may moderate the relations between job demands and likelihood of breach. The control-hypothesis (Van der Doef & Maes, 1999; Van Yperen & Hagedoorn, 2003) explains how autonomy may buffer the relationship between demands and breach. Extensive research has shown that autonomy at work provides employees with the necessary control to decide how things are done, to have an impact on work, and to adjust working conditions (Van der Doef & Maes, 1999). Hence, in weeks where employees experience high autonomy, they will have more control over their job demands, and thus be able to cope with demands in a more effective way. Autonomy thus allows for more control through which

employees can counteract the potential resource losses created by high job demands (Hobfoll, 2002). As a result, autonomy may buffer against increasing susceptibility resulting from high demands.

For development and learning opportunities, we expect the reverse to be the case. The beneficiary of development behaviors model from Maurer, Pierce and Shore (2002) explains why development may not be beneficial to counteract high job demands. First, development activities take time and energy, and therefore, in the short run, only add to job demands. Second, learning opportunities are often unfocused, such that development is not directly transferable to the workplace. Instead, they may be focused either on non-job related tasks, or on tasks that are important to one's supervisor, which means that they might not be directly related to coping better with job demands. Therefore, in the short run, development may actually add to the job demands, and therefore may even accentuate relationships of job demands with breach likelihood as it constitutes an additional burden during a particular week.

Finally, support has shown to play ambiguous roles in how it may operate in relation to contract breaches (Bal et al., 2010; Restubog et al., 2010). On the one hand, support may act as a buffer, helping workers to alleviate the negative effects of breach, while on the other hand, support may act as a contrasting effect to breach, and may put breach in a negative light (Bal et al., 2010: In the context of the current study, the coping-hypothesis (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007) explains how social support may buffer the demands-breach relationship. There is an established field of research which has shown that social support is important for employees in being able to cope with stressors at work (Van der Doef & Maes, 1999). Support from supervisors and coworkers not only provides employees with instrumental ways through which they can manage stress and develop strategies to deal with demands at work, but also emotional support for expressing their views and sharing thoughts

and emotions. Hence, when employees perceive a lot of social support, they will be better able to cope with high job demands, and this will buffer against the likelihood of perceiving a breach (see also Solinger et al., 2015). They will be less likely to interpret minor negative events at work as a contract breach (Tekleab, Takeuchi, & Taylor, 2005). In all, we expect that autonomy and social support to buffer the relationships between job demands and breach, while development will accentuate the relationships. Hypothesis 3 is:

*H3a: autonomy moderates the relations between job demands and contract breach in the next week, with stronger relations when autonomy is low.*

*H3b: development moderates the relations between job demands and contract breach in the next week, with stronger relations when development is high.*

*H3c: autonomy moderates the relations between job demands and contract breach in the next week, with stronger relations when social support is low.*

### **Job Resources as Moderator in the Job Demands – Violation Relationships**

In contrast to our arguments around resources in relation to breach, we expect different interaction patterns in relation to violation. Demands and resources combinations may make employees more or less susceptible to experiencing a breach, but when they have experienced a breach, demands-resources combinations primarily serve to make sense of the breach itself and therefore influence the extent to which violation is felt; a process that can be explained by drawing on the betrayal-hypothesis (Bal et al., 2010; Restubog et al., 2010). As violation is only felt once a breach has occurred, available resources may be used for interpretation of the breach, and to determine how an employee will emotionally respond to the breach. In this respect, earlier research has shown that positive work-related experiences may form a contrast to a breach (Bal et al., 2010; Restubog et al., 2010), as the positive experiences, indicated by high available resources in a particular week, are incongruent with the employer's actual treatment of the employee, as one's contract has been broken. This may lead to feelings of betrayal (Restubog et al., 2010), which may lead to higher felt violation, as the perception of a breach and thus the failure of the employer to deliver upon its obligation, stands in contrast with the employee's positive experiences in their daily jobs. This perceived

incongruence may actually worsen the relationship between job demands and violation, and the employer may be blamed for the experienced breach, leading to higher felt violation (Bal et al., 2010; Morrison & Robinson, 1997). Hypothesis 4 therefore is:

*H4: Job resources (a: autonomy; b: development; c: social support) moderate the relations between job demands and feelings of violation in the next week, with stronger relations when job resources are high.*

## **Methods**

Data were collected through a six-week lasting weekly diary study in an adult care organization providing elderly care in the middle of the Netherlands. The organization consisted of 10 different locations and a head office. The locations offered different types of care for older people, such as short-stay options for revalidation or long-stay for people with dementia. The organization included several nursing homes, as well as semi-independent apartments where older people could live independently with the assistance of nurses in the direct vicinity. The organization consisted of about 1450 employees, and 700 volunteers. Three hundred randomly selected paid employees (volunteers were not included in the study) in different nursing and care jobs were approached via mail with a request to participate in a six-week on-line weekly diary study. The organization provided access to computers on site and there was also the possibility to fill out the questionnaires from home. Respondents filled in the questionnaire every last day of their workweek, mostly Friday or Saturday, and were instructed to look back on the past week. One-hundred twenty employees agreed to participate in the study and 90 respondents ultimately provided usable responses (a final 30% response rate). In total, 474 observations (i.e., respondents with complete data during a particular week) were obtained, which corresponds to a response rate of 87 percent. Respondents were on average 47.54 years old ( $SD = 10.16$ ), 92% were female, and respondents worked on average 26 hours per week. Mean average organizational tenure was 9 years ( $SD = 7.82$ ).

### *Instruments*

Validated scales were used to measure job demands and resources, but all items were adapted to measure the week that participants looked back upon. All scales were assessed via five-point Likert scales ('not at all' to 'to a very great extent'). Short scales were used to assess each variable, to encourage high response rates and minimize study attrition.

*Job demands* (reliability range throughout the six weeks  $\alpha = .76 - .86$ ) were measured using the Dutch version (Furda, 1995) of Karasek's (1985) Job Content instrument. From the scale, three items were selected that referred to physical demands, time pressure, and quantity of the work. An example item is: "The past week my work was physically demanding". Job demands in health care are resulting from both predictable work schedules and tasks which have to be completed and unpredictable tasks resulting from demands that are developing in a certain situation (e.g., emergencies, illnesses, and death). Employee assessments of both of these types are likely to be captured in our measure of how demanding employees rated their jobs to be in a particular week. *Autonomy* at work (range  $\alpha = .89 - .95$ ) was assessed by three items of Karasek's (1985) Job Content instrument. These items measure the degree to which employees have discretion in deciding how to perform their work. An example item is: "This week, I decided myself how I execute my work". *Development opportunities* (range  $\alpha = .86 - .90$ ) were measured by three items selected from the scale developed by Bakker, Demerouti and Schaufeli (2003). The scale measures the extent to which work offers opportunities to employees to develop themselves and learn new things. An example item is: "This week, my job offered me the opportunity to learn new things". *Social Support* (range  $\alpha = .82 - .87$ ) was measured with seven items from Bakker and Bal (2010), measuring the extent to which managers and colleagues are helpful towards them, provide them with feedback, and the extent to which there is a friendly atmosphere at work. An example item is: "This week, I received sufficient information about the quality of my performance".

*Psychological contract breach* was measured with an open-ended question (Dawson et al., 2014). Because psychological contract breach refers to an *event* in which the employer does not fulfill its obligations (Rousseau, 1995), it was important to capture the construct as it has been developed theoretically (Morrison & Robinson, 1997). Respondents were asked whether anything had happened to them during the last week, in which their supervisor and/or organization had failed to fulfill one or more obligations towards them. Respondents described the event that had occurred. In total, 90 breaches were reported (19%). 36 respondents did not report a breach during the six weeks, and 54 respondents reported between one and five distinct breaches. Breach was coded as zero when no breach was reported, and one when a breach was described during that particular week. ANOVA-tests showed there were no weeks in which significantly more breaches were reported than in other weeks ( $F = 1.12, ns$ ), with between 11 and 21 breaches every week.

*Feelings of Violation* were only measured when the participant reported a breach. Violation was measured with the question “To what extent does the breach that you have described has a negative emotional effect on you?” (1 = not at all; 5 = to a very great extent; Morrison & Robinson, 1997). Our measure is in line with the measure of Robinson and Morrison (2000), who measured violation as the anger, frustration, and betrayal employees feel towards their organization. One-item measures are not uncommon in diary studies, due to the space constraints researchers have (Hülshager, Alberts, Feinholdt, & Lang, 2013). When no breach was reported, violation was automatically coded as zero and the participant did not get the violation question.

#### *Between-Person Level Variables*

In our analyses we included variables that might influence perceptions of breach and violation (Bal et al., 2008). *Age* was measured in years, *education* was measured as the highest finished educational degree (1 = primary education; 7 = university degree), *contract*

*hours* were measured as the total number of weekly hours employees worked according to their contract ( $M = 25.12$ ,  $SD = 6.38$ ), and finally the *total number of breaches* employees reported during the study was included, to rule out the likelihood that some employees are more prone to report breaches (Raja, Johns, & Ntalianis, 2004).

### *Analysis*

We explicitly captured the interrelatedness of breach and violation—with violation being conditional on breach—by modeling them *simultaneously* in a zero-inflated Poisson regression (ZIP) model (Lambert, 1992). ZIP models consist of a binary part and a Poisson part. The binary part is used to predict breach or no breach, while the Poisson part is used to predict the intensity of violation once breach has occurred. ZIP regression is different from traditional regression in multiple ways. As breach is a rare event, there is a strong likelihood to experience no breach at all, while only during the weeks in which a breach is experienced, violation may occur. ZIP regression allows the model to accommodate this phenomenon in two ways: it first estimates the likelihood to experience a breach (or not), and second, only among those who experience a breach, it estimates how strong the felt violation is. This analyses allows us to test violation only among weeks with a breach, rather than assessing violation where there was no breach at all, which is more consistent with the literature (Morrison & Robinson, 1997). As the focus is on within-person processes, we person-centered the predictor variables (i.e., group-mean centering; Fisher & To, 2012). Because our data have a nested structure with measurements nested within individuals, we performed all analyses within a multilevel framework, thus performing two-level ZIP regression analysis (Lee, Wang, Scott, Yau, & McLachlan, 2006). We tested a multilevel random intercept, fixed slope model, which allowed intercepts to vary across individuals, while slopes were fixed across persons. We tested a main-effects model as well as a model including the interaction effects. Note that, because feelings of violation can only occur once breach had occurred (i.e.,



violation is conditional on breach), the relationships between violation and the predictor variables were computed on those data points for which the participants experienced a breach ( $N = 90$ ).

In our analyses, we predicted contract breach and violation on the basis of the lagged effects of autonomy, social support, development opportunities, and job demands (i.e., job demands and resources in the preceding week) using a two-level ZIP regression model. We controlled for age, education, and contract hours. Moreover, we controlled for total number of breaches within persons to test whether some people were more prone to experience breaches, and therefore regardless of their job experiences were more likely to report breaches (Raja et al., 2004). Lagged violation was included as a predictor in the model to account for residual dependencies. It may be that when employees have experienced a strong violation during a particular week, this may spillover to the next week (Solinger et al., 2015). We controlled for lagged violation only, as this variable represented both breach and violation. The scores for lagged violation ranged from 0 to 5, indicating that all zeroes represented no breach in the previous week, and the 1-5 scores the intensity of the violation after a breach in the previous week. Hence, we controlled for breach and violation in the previous week, using the same variable. We estimated a model in which breach and violation in weeks 2-6 were the dependent variables, whereby the job demands and resources in the preceding week related to these outcomes. All analyses were conducted in Mplus version 7 (Muthén & Muthén, 2012).

## **Results**

Table 1 shows the means, standard deviations, and the correlations among the variables. A correlation between breach and violation was not calculated, as they are inherently interdependent; it is only when a breach has occurred, that one can experience violation, and hence violation is not experienced or reported when there is no breach. The

results of the analyses with both the main-effects model and the interaction-effects model can be seen in Table 2. In the binary part of the ZIP-model, occurrence of breach was tested, and thus coefficients refer to the odds of belonging to the breach group (i.e., the odds whether one is experiencing a breach).

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H1 predicted that job demands were related to breach in the next week. This hypothesis was rejected; job demands were unrelated to contract breach in the next week ( $b = .284, ns$ ). Hence, there was no direct effect of job demands in predicting the likelihood of experiencing a breach in the next week. H2 predicted that job demands were positively related to violation in the next week. Job demands were also unrelated to violation in the next week ( $b = .296, ns$ ). Hence, H2 was also rejected. Job demands were marginally significant in relation to violation in the next week after adding the interaction effects ( $b = .174, p < .10$ ). Hence there is some indication to the relationship between job demands and violation, but in general little evidence of direct relationships between job demands and breach and violation.

H3 predicted that job resources moderate the relationships of job demands with contract breach in the next week. Autonomy indeed moderated the relationship of job demands with contract breach in the next week ( $b = -.734, p < .01$ ). Figure 2 shows the interaction effect, showing the odds of experiencing a breach for increasing job demands at low and high levels of autonomy (i.e., one SD below and above the mean of autonomy). The relationship of job demands with breach in the next week was positive for low autonomy ( $b = .533, p < .001$ ), while the relationship was negative for high autonomy ( $b = -.282, p < .05$ ). This fully supports H3a; there is a higher probability of breach in the next week following high job demands and low autonomy. The interaction between development and job demands was also significant in relation to contract breach in the next week ( $b = 1.127, p < .05$ ). The

interaction pattern is shown in Figure 3, which shows that the relationship between job demands and contract breach in the next week was positive for high development ( $b = .657, p < .001$ ), while the relationship was negative for low development ( $b = -.347, p < .01$ ). Hence, H3b was also supported. Furthermore, the interaction effect of social support and job demands was also significant in relation to contract breach in the next week ( $b = -.944, p < .05$ ). Figure 4 shows that, in line with the hypothesis, the relationship was positive for low support ( $b = .487, p < .001$ ), while the relationship was nonsignificant for high support ( $b = -.177, ns$ ). Hence, H3c was supported; social support buffered against the negative effect of job demands on contract breach in the next week. Especially in case of low social support there were increasing odds to experience a breach when job demands increased.

H4 predicted that job resources moderated the relationships between job demands and violation in the next week. Table 2 shows that autonomy ( $b = .020, ns$ ) and development ( $b = -.022, ns$ ) did not moderate the relation between job demands and violation in the next week, rejecting H4a and H4b. For social support, we found a significant interaction ( $b = .214, p < .10$ ). Given the restricted sample size of the count part ( $N = 90$ ), we deemed it appropriate to use alpha levels of .10 for estimation of significant effects. Figure 5 shows that the relationship was non-significant for low support ( $b = -.040, ns$ ), while the relationship was positive for high support ( $b = .388, p < .001$ ). Hence, job demands were more strongly related to violation when social support was high, indicating support for the betrayal effect. This supports hypothesis H4c.

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## Discussion

This study investigated predictors of psychological contract breach and feelings of violation, and how job demands and resources in a particular week influence the extent to

which employees are more prone to perceive breach and violation in the following week. Based on Conservation of Resources theory (Hobfoll, 1989), we argued that job demands would make employees more susceptible to experiencing breach and violation, but we found little evidence for direct relationships. It may be that as breaches result from a variety of work-related events (such as a manager who fails to arrange work schedules properly), job demands are constituting part of everyday working life, and that it is only when employees lack the necessary resources to cope with their job demands, that a situation may be created in which they are more likely to interpret negative events at work as a breach (Bakker et al., 2007). Indeed, we found that job demands were related to a higher likelihood of breach over time only when employees had low autonomy and social support, and when they had high development. Thus, autonomy and social support attenuated the relations between job demands and occurrence of breach, while development accentuated these relationships.

When employees perceive high autonomy and social support, they are better able to cope with job demands, through which they will be less likely to perceive a breach. Autonomy allows employees to exercise control over their work (Van Yperen & Hagedoorn, 2003), and social support provides employees with means of coping at work (Bakker et al., 2007; Van der Doef & Maes, 1999), both of which contribute to prevention of resource losses as a result of high job demands (Hobfoll, 2002). While high job demands do not necessarily have to be negative (Bakker et al., 2014), they may lead to employees becoming cynical and interpreting events at work as contract breaches when they lack the necessary resources to cope with these demands. Social support, therefore, may be important to alleviate employees' negative feelings resulting from high demands, and prevent them from perceiving breach. However, we also found that development had an opposite effect. Employees who perceived high development during a particular week, were more likely to perceive a breach in the next week when they experienced high job demands. This may be explained on the basis that even

though development is generally considered as a resource (Maurer, 2001), it also requires an investment of time and energy, and it is not necessarily helpful for coping with job demands and preventing resource losses. Hence, development may be beneficial, but only when it is targeted at coping with demands, supported by the supervisor, and potentially helpful only over longer periods of time, while the learning may appropriately be transferred to the workplace (Maurer et al., 2002). Therefore, in the short run, such as the one-week time lags we used in the current study, development may actually constitute an additional burden for employees, through which they are further depleted of energy and therefore are more likely to experience breach as they lack the necessary resources to cope with work pressure.

Furthermore, we found one interaction effect in relation to feelings of violation, where we showed that the impact of job demands on feelings of violation was stronger when social support in the preceding week was high. This indicates some support for the betrayal effect (Bal et al., 2010; Restubog et al., 2010), as higher job demands were related to higher violation only among employees who experienced social support during the previous week. It may be that supportive relationships help employees to make sense of breach, and the experience of helpful coworkers and supervisors may actually contrast the more general negative treatment by the employer, which may enhance anger and frustration (i.e., higher violation). Social support may also stimulate rumination, where breaches are shared and discussed with coworkers, through which they are more deeply processed and remain salient.

In sum, we observe that autonomy and social support act as buffers against the impact of job demands on breach, while support acted as intensifier in the relationships between job demands and violation. This difference may be explained on the basis of research that shows that social support may have differential effects in the context of breach; it may act both as buffer and as intensifier (Bal et al., 2010). While both of these notions have received empirical support (Dulac et al., 2008; Restubog et al., 2010), this study may at least partly

resolve the debate, by showing that sensemaking processes are fundamentally different before a breach has occurred and after the breach (Morrison & Robinson, 1997). Employees have to make sense of the continuous range of events occurring in the workplace, and establish for themselves whether they perceive an event as a breach of their psychological contract. However, once they have perceived something to be a breach, their emotional reaction is established in a different way, for instance through unfavorably comparing the mistreatment by their employer with the support they receive from their immediate environment. Hence, there is a need to theoretically and empirically distinguish between the pre-breach and post-breach phase, each having its distinct processes that lead to higher likelihood of breach and feelings of violation (*cf.* Morrison & Robinson, 1997). While cognitions of breach may be resulting from high demands and low resources, affective reactions may result from inconsistencies between demands and resources. This may indicate that buffers and intensifiers may manifest themselves in different stages of breach and violation assessments and sensemaking (Parzefall & Coyle-Shapiro, 2011).

### *Theoretical Implications*

The study shows how breach and violation may emerge within the context of the weekly work experiences of employees, and how breach and violation differ in the extent to which they relate to job demands and resources. While psychological contract breach has primarily been studied with respect to the major breaches employees experience in the workplace (such as a cancelled promotion; Zhao et al., 2007), we show that contract breach may emerge in weekly working life, and that employees are more susceptible to experiencing breaches under specific weekly work conditions, such as an excessive workload in combination with a lack of job resources to cope with these job demands. Hence, we provide a first step towards a better understanding of the psychological contract dynamics at the weekly level. Emphasizing the subjectivity of the contract (Rousseau, 1995), we have

ascertained that job demands and resources may make employees more susceptible to experience breach and violation.

Moreover, in this study we suggest that breach and violation are inherently subjective and emotional experiences, which are strongly related to the extent to which people have control over themselves and the situation. Thus, in line with COR-theory (Halbesleben et al., 2014), breach and violation may result from a combination of high demands and low autonomy and support in a particular week, or high development. Resource losses may thus contribute to higher vulnerability to a breach. Further integration of a resource perspective with psychological contracts will help better understanding of the dynamics of psychological contracts in the workplace (see e.g., Bal et al., 2010). More specifically, future theory and research on psychological contracts may explicitly link experiences of breach and violation, and the amount of energy and effort that is involved for people to make sense of what is happening in their weekly working lives, as well as breach and violation.

Finally, the study shows that it is important to distinguish the factors under which breach may be more likely to occur and the extent to which violation is felt after a breach. While the former may be more likely to occur under condition where employees experience high demands and few resources to cope with these demands, the latter is more likely to be affected by high demands and high resources. Breach may be prevented when employees have the opportunity to have control over and are able to cope with their demands (Bakker et al., 2007; Van der Doef & Maes, 1999), but violation results from different sensemaking processes (Chaudhry et al., 2009). As previous research has shown, employees may feel betrayed when they breach is incongruent with their work experiences. The notion of (in-)congruence of psychological contract evaluations in with other experiences at work is currently not yet fully integrated, and therefore theory on psychological contracts may more explicitly link breach perceptions with how employees experience other factors at work.

### *Limitations and Suggestions for Future Research*

Despite the strengths of the study, including the repeated measures design and the mixed-method approach, there are some limitations. First, the measures were self-reported. Even though we used multiple methods, including scales as well as open questions, common method bias could have affected the results. However, the chance of common method bias was minimized through investigating lagged relations (with time lags of one week), and a focus on moderated relationships, which are less strongly affected by common methods (Siemens, Roth & Oliveira, 2010). Another issue is whether recall bias might have affected the results, as people may be more inclined to recall stronger affective events, and thus report only breaches with a high violation component attached. However, there was little indication that this was actually the case in our study, with a mean violation of 3.29 and enough variation on the measure ( $SD = 1.15$ ). This indicates that after a breach, there is considerable variation in the violation felt. Moreover, our approach to ask people to report a real event on a weekly basis will also reduce recall bias (Dawson et al., 2014). Finally, breach is a subjective experience, and there may be breaches which are not recalled, as they had no or little impact on the employee. However, when employees do not recall a breach to have happened, it may be questioned whether it actually constitutes an actual psychological contract breach. Furthermore, due to the constraints that diary studies pose in terms of length of questionnaires, we had to rely on shortened scales. This does not necessarily produce methodological problems, because short scales may be valid and reliable (Hülshager et al., 2013). However, we do advise future researchers to use more extensive measures, so that the current results can be validated.

An important area for future research on psychological contracts are the sensemaking and attribution processes involved in breach responses. While this study and previous research (e.g., Solinger et al., 2016) have shown that once contract breaches arise from and



elicit sensemaking processes, there is actually no research which has empirically investigated the role of these processes. Therefore, future research should also incorporate more explicitly the sensemaking and coping mechanisms in relation to psychological contract experiences.

Moreover, future research could shed more light on the role of development since they accentuated the relationships between job demands and breach. It might be that it takes a longer period for employees to fully grasp the benefits of development, and as development may come as an additional burden at work, it may have short-term negative effects as they impede coping successfully with job demands (Maurer et al., 2002). Therefore, another question pertains to the role of time in how resources interact in relation to breach and violation. Future research might shed more light on this issue, and determine the more precise time at which employees perceive breach and violation and how they react upon it. Another issue is that we were unable to control for shiftwork. In health care, employees tend to work in shifts, and may work during both days and nights, which may affect the extent to which workers have interactions with their managers through which contract breach may be more or less likely. Future research could therefore elucidate the effects of different contextual characteristics on breach likelihood. Finally, it is important that future research also investigates the outcomes of these reported breaches, to understand whether the perceptions of these breaches have similar or different outcomes than the frequently used scales to assess breach and violation (Robinson & Morrison, 2000).

### *Practical Implications*

The study shows that job demands are related to higher probability of experiencing a contract breach when employees have few job resources. Moreover, the study shows that job demands related to higher violation (in combination with high support), and therefore, organizations should be aware that when they overload employees with work, they become more likely to perceive contract breach and violation, especially when employees feel that

they lack access to job resources, such as enough autonomy and control, and social support. Especially during the global economic crisis, it has become difficult for organizations to prevent employees from perceiving contract breaches by their employer (Granter et al., 2015). Moreover, while offering support may be important in the context of high job demands to prevent employees to experience contract breaches, support was not shown to decrease feelings of violation. Hence, when employees experience contract breach, it is more important to decrease job demands than to only offer support to employees, and to avoid violation. Previous research has shown (e.g. Zhao et al., 2007) that contract breach is related to a variety of adverse outcomes, such as low performance and higher turnover, which implies that managers and organizations should pay more attention to prevention of breach.

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Table 1: Means, standard deviation, and zero-order correlations among all variables. The reliabilities (between brackets) are on the diagonal.

		Level	N	M	SD	1	2	3	4	5	6	7	8
1	Age	2	90	47.54	10.16	--							
2	Education	2	90	4.06	1.58	-.08	--						
3	Contract hours	2	90	25.12	6.38	.05	.19**	--					
4	Total no. Breaches	2	90	1.00	1.38	.18**	.03	-.01	--				
5	Autonomy	1	474	3.06	1.03	.00	.24**	.05	-.00	(.89-.95)			
6	Development	1	474	2.44	.92	-.11*	.23**	.05	-.08	.35**	(.86-.90)		
7	Social support	1	474	2.41	.59	-.22**	-.00	.04	-.19**	.25**	.56**	(.82-.87)	
8	Job demands	1	474	3.08	.96	-.04	.07	.01	-.02	.09*	.28**	.17**	(.76-.86)
9	Contract Breach	1	474	.19	.39	.10*	.02	.02	.60**	-.07	-.08	-.18**	.10*
10	Violation	1	90	3.29	1.15	.09	-.00	.02	.59**	-.07	-.07	-.17**	.10*

Note: \* $p < .05$ ; \*\* $p < .01$ ; correlations of breach with violation were not calculated due to interdependence of these measures. Contract breach: 0 = no breach, 1 = breach.

Ranges of reliabilities across the weeks are shown along the diagonal.



Table 2: Results of Multilevel ZIP Regression Models with Concurrent and Lagged Effects of Job Experiences on Contract Breach and Violation.

	Contract Breach (binary part)				Violation (count part)			
	Main Effects		Interaction Effects		Main Effects		Interaction Effects	
	Model		Model		Model		Model	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
<i>Random Intercept</i>	3.397	.981	3.665	1.100	1.667	.404	1.526	.424
<i>Between Level Predictors</i>								
Age	-.002	.019	-.000	.020	-.017*	.007	-.018*	.008
Education	.126	.106	.130	.114	.020	.038	.036	.041
Contract Hours	-.014	.026	-.015	.028	-.003	.010	.000	.11
Total No. Breaches	1.168***	.120	1.268***	.155	.075	.044	.101	.048
<i>Within Level Predictors</i>								
Job Demands <sub>t-1</sub>	.284	.413	.176	.470	.023	.056	.174†	.092
Autonomy <sub>t-1</sub>	-.060	.422	-.494	.477	-.011	.085	.077	.105
Development <sub>t-1</sub>	-.028	.448	.071	.409	.184	.099	.126	.081
Social support <sub>t-1</sub>	-.200	.464	-.247	.438	-.032	.114	-.001	.121
Violation <sub>t-1</sub>					.045	.026	.049	.034
<i>Interactions</i>								
Job Demands <sub>t-1</sub> * Autonomy <sub>t-1</sub>			-.743**	.277			.020	.066
Job Demands <sub>t-1</sub> * Development <sub>t-1</sub>			1.127*	.464			-.022	.068
Job Demands <sub>t-1</sub> * Social Support <sub>t-1</sub>			-.944*	.417			.214†	.117
-2log-likelihood	193.052		187.317					

Note. Estimates for breach indicate the likelihood to experience a breach. \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ , †  $p$

< .10. Sample size binary part (predicting breach): 303; sample size count part (predicting violation): 90. Sample size at Level 1: 474; Sample size at Level 2: 90. Variance components cannot be reported for ZIP-models, as the variance is equal to the mean.

Figure 1: Research Model of the Current Study

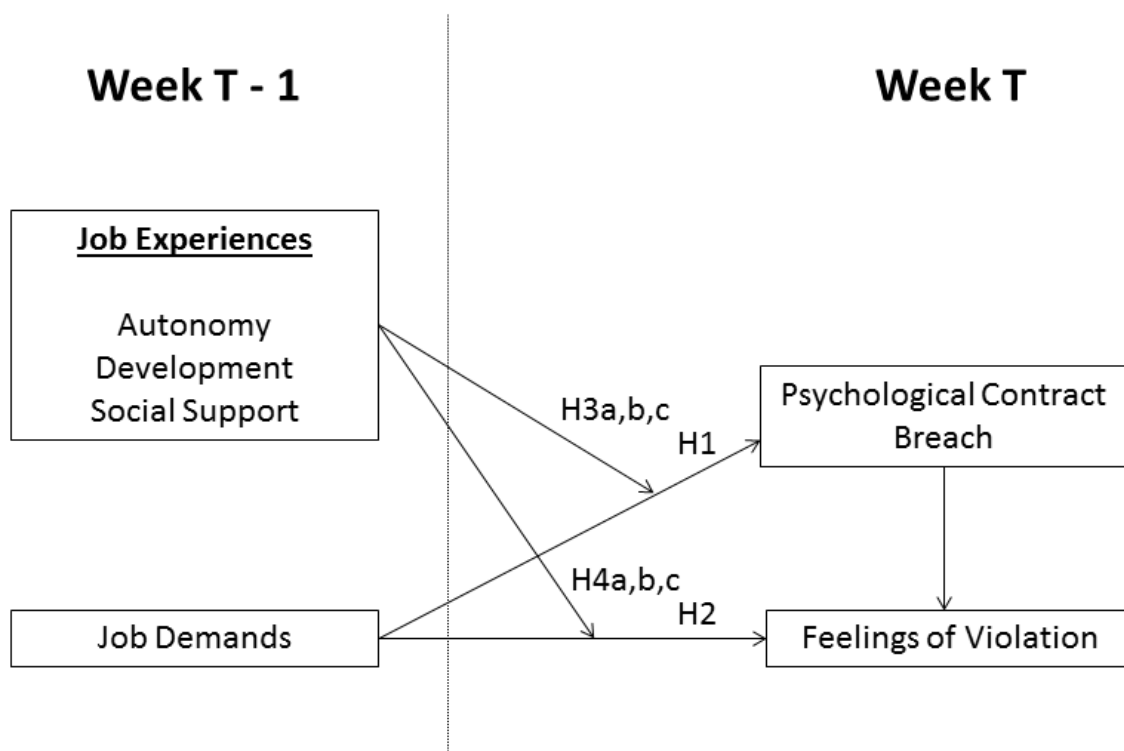


Figure 2: Interaction Effect between Lagged Job Demands and Lagged Autonomy in Relation to Psychological Contract Breach (showing the probability of experiencing a breach)

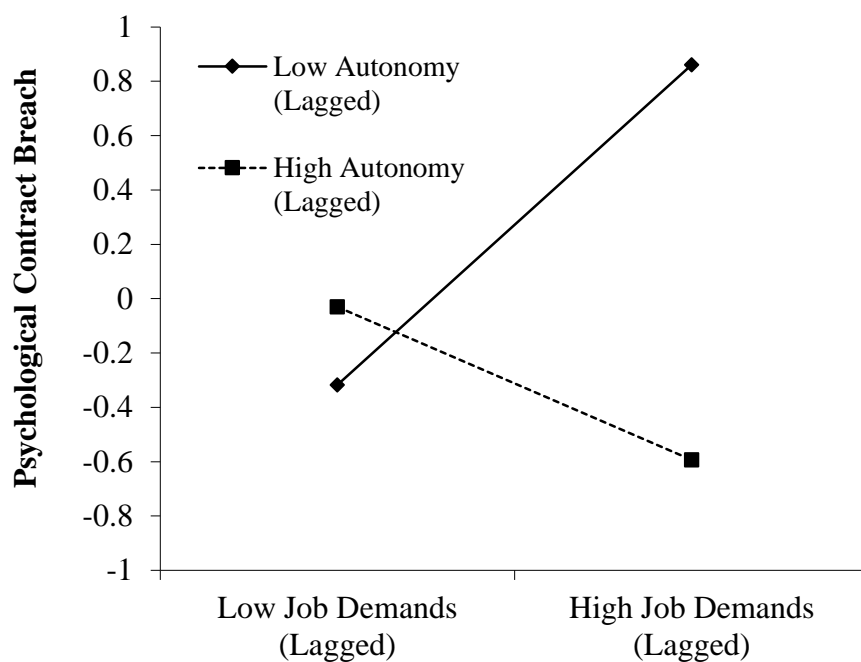


Figure 3: Interaction Effect between Lagged Job Demands and Lagged Development in Relation to Psychological Contract Breach (showing the probability of experiencing a breach)

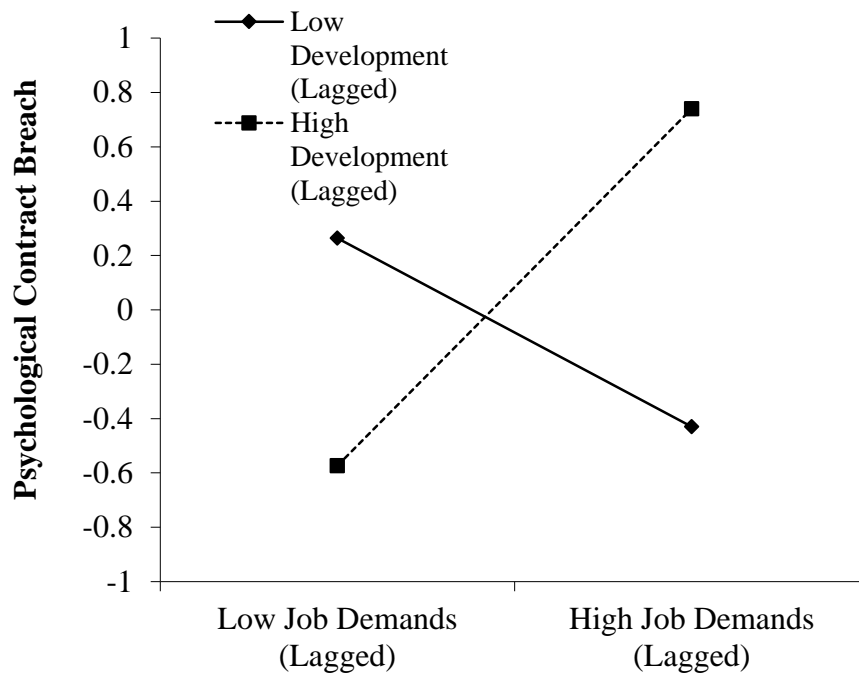


Figure 4: Interaction Effect between Lagged Job Demands and Lagged Social Support in Relation to Psychological Contract Breach (showing the probability of experiencing a breach)

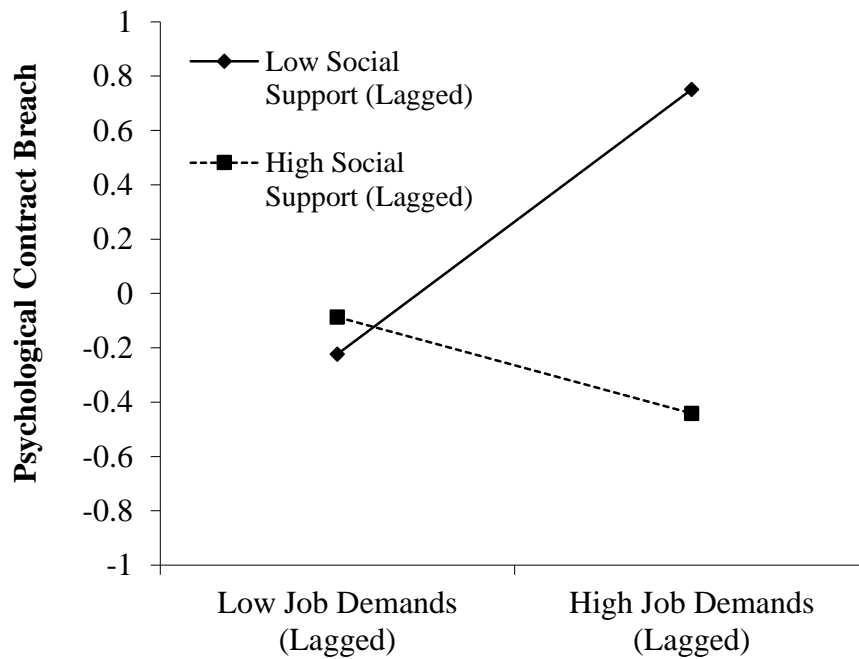


Figure 5: Interaction Effect between Lagged Job Demands and Lagged Social Support in Relation to Feelings of Violation

